SENATE LOCAL GOVERNMENT
EXHIBIT NO. 3
DATE 1.16.09
BILL NO. SB109

I wish to comment on S.B. 0109, as a resident of Bozeman, one of our state's larger cities, for 25 years.

I grew up in one of our nation's larger cities, where, as an amateur astronomer, I was lucky to be able to see three stars clearly in the sky on a summer's night. To me, the "Milky Way" , our home galaxy, was some invisible object perhaps visible through the large telescopes of a university or national observatory.

Within two weeks of moving to Bozeman, I had an incredible experience. We were renting near the center of town while shopping for a home. I stepped out my front door, looked up, and **without thinking about where anything "ought to be" in the sky, was dazzled not only by the Milky Way arching across the sky, but immediately my eyes picked out the Andromeda Galaxy.**

The Andromeda Galaxy is normally considered the most distant object one can see with the unaided eye; a spiral galaxy about 2 million light years away. To my amazement, it leaped out of the beautifully dark sky (the stars all appeared as jewels), with no effort on my part to locate it.

More recently, living a bit further from the center of town, I can still see the Andromeda Galaxy; now, however, I have to think about where to look – find this star, line it up with that other bright star – go 2/3 of the way to this star – there, I think that faint smudge is it. Or are my eyes just getting bad? Certainly I can convince myself I can see it, but it is no longer a crystalline wonder against black velvet. We don't need to lose that, and we shouldn't.

One more quick story, which didn't even take place in Montana. I was giving a volunteer talk at the Madison Campground in Yellowstone, summer of 2006, on the Mars Rovers and their explorations. After my talk, we had telescopes set up by the river so people could observe the planets, star clusters, and other objects in the summer sky. As I walked to the river, I heard a small boy say to his parents:

"Look...the stars go ALL THE WAY DOWN to the ground!"

That child may have been from New York, or Miami, or Billings....but wherever he was from, he ought to live somewhere where HIS stars go "all the way down" .

All of our children deserve to see the magnificent universe in which they live.

I respectfully ask for your support for S.B. 0109.

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William A. Hiscock

Professional Positions Held:

2003-2008	Physics Department Head	Montana State University
1994-present:	Director	Montana NASA EPSCoR Program
1993-present	Professor of Physics	Montana State University
1991-present	Director	Montana Space Grant Consortium
1984-93	Asst./Assoc. Professor Physics	Montana State University
1979-84	Postdoctoral positions	U. California Santa Barbara, U. Texas, Yale

Education:

1973	B.S.	Physics	California Institute of Technology
1975	M.S.	Physics	University of Maryland
1979	Ph.D.	Physics	University of Maryland

Scientific Publications:

Over 100 refereed publications in astrophysics, gravitation theory, cosmology, and quantum field theory. Publications in Nature, Astrophysical Journal, Physical Review Letters, Physical Review, Journal of Mathematical Physics, and others.

Selected Recent State and National Leadership Positions:

Chair, National Council of Space Grant Directors, 2002 – 2004
Co-Chair, National Space Grant Student Satellite Program, 2001 –
Member, Board of Directors, National EPSCoR Foundation 2002 – 2005
State of Montana Representative, Aerospace States Association 1997 –2007
Member, Board of Directors, National Space Grant Alliance 2006-2008 (vice-Chair 2007)
Member, Board of Directors, National EPSCoR Coalition, 2007-2009

Selected Awards:

Worldwide:
Frank J. Malina Astronautics Medal, International Astronautical Federation, 2003
National:
EPSCoR/IDeA Foundation National Service Award, 2006
At Montana State University:
Wiley Outstanding Research Award, 1990.
Phi Kappa Phi Fridley Outstanding Teaching Award, 1992.
Cox Family Award for Academic Excellence in Teaching and Research, 1993.

Teacher:

Instructor of 21 different physics and astronomy courses; guest lecturer in Biology, Mathematics, and History courses; many guest lectures and short courses for K-12 teachers and students. Supervisor of 3 B.S., 2 M.S., and 9 Ph.D. thesis students (degrees awarded).

Science for the public:

Author of pedagogical and public outreach articles in the American Journal of Physics, Scientific American (electronic edition), Discover, Science Digest, Quantum, and others. Appearances and interviews on local, national, and international radio and television programs, newspapers, and magazines, including BBC World Service, BBC's "The World Tomorrow", the Times of London., London Daily Telegraph, the European, and others.